

Appl. No. : 10/667,580
Filed : September 22, 2003

AMENDMENTS TO THE CLAIMS

The claims as listed below will replace all prior listings and presentations of claims in the above-identified application.

Please amend Claim 2, cancel Claims 1 and 3-12, and add new Claims 21-33 as follows:

1. **(Canceled)**
2. **(Currently Amended)** An implant for treating glaucoma in an eye, said implant having a longitudinal implant axis and comprising:
 - an outflow portion through which said longitudinal implant axis passes, said outflow portion shaped and sized to be:
 - (a) introduced into Schlemm's canal of the eye with said portion of said longitudinal implant axis at an angle to Schlemm's canal; and
 - (b) received at least partially within Schlemm's canal regardless of a rotational orientation of the outflow portion about said longitudinal implant axis during said introduction;
 - a plurality of longitudinally spaced openings in the outflow portion, the openings allowing fluid to communicate from a lumen within the outflow portion to a location outside the outflow portion;
 - an inflow portion configured to be positioned within the anterior chamber so as to permit communication of fluid from the anterior chamber of the eye to the outflow portion; and
 - an anchoring member extending from the implant;

wherein said longitudinal implant axis extends through the trabecular meshwork of the eye and is generally orthogonal to Schlemm's canal during said fluid communication.

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3. (Cancelled) .

4. (Cancelled)

5. (Cancelled)

6. (Cancelled)

7. (Cancelled)

8. Canceled)

9. (Cancelled)

10. (Cancelled)

11. (Cancelled)

12. (Cancelled)

13. (Previously presented) The implant of Claim 2, wherein the outflow portion has a distal end with a transverse dimension that varies along the longitudinal implant axis.

14. (Previously presented) The implant of Claim 13, wherein the distal end of the outflow portion has a generally conical shape.

15. (Previously presented) The implant of Claim 13, wherein the distal end of the outflow portion has at least one sloped surface.

16. (Previously presented) The implant of Claim 2, wherein the anchoring member comprises a surface that is generally transverse to the longitudinal implant axis.

17. (Previously presented) The implant of Claim 2, wherein the distal end and the outflow portion are integrally formed.

18. (Previously presented) The implant of Claim 2, further comprising an intermediate section between the inflow portion and the outflow portion.

19. (Previously presented) The implant of Claim 2, wherein at least a portion of the implant is configured to reside within the trabecular meshwork of the eye.

20. (Previously presented) The implant of Claim 2, wherein the outflow portion is shaped and sized to be introduced through Schlemm's canal of the eye.

21. (New) An ocular implant, comprising:

a substantially straight, rigid, elongate body, the body having a self-trephinating distal portion that narrows toward a distal end, at least one inlet communicating with at least one inner lumen that communicates with a plurality of outlets, the lumen having a

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sufficient length to extend from an anterior chamber of an eye to a physiologic outflow pathway, and an anchor member extending from the implant.

22. (New) The implant of Claim 21, further comprising means for regulating fluid flow through the lumen.

23. (New) The implant of Claim 22 further comprising a micro-pump communicating with said lumen.

24. (New) The implant of Claim 22 further comprising a pressure sensor coupled to the body.

25. (New) The implant of Claim 21, wherein the self-trephinating distal portion is sized and configured to penetrate the trabecular meshwork of an eye.

26. (New) The implant of Claim 21, wherein the self-trephinating distal portion is sized and configured to penetrate scleral tissue.

27. (New) The implant of Claim 21, wherein at least one outlet of said plurality of outlets is arranged on said body so as to drain into Schlemm's canal when the distal portion of the body is anchored in adjacent ocular tissue.

28. (New) The implant of Claim 21, wherein the elongate body has an outer surface of which at least a portion is porous.

29. (New) The implant of Claim 21, wherein the elongate body includes a coating which includes a bioactive agent.

30. (New) The implant of Claim 29, wherein the bioactive agent is selected from the group consisting of: a vasodilating agent, an anti-glaucoma drug, or an anti-inflammatory drug.

31. (New) The implant of Claim 21 further comprising a biocompatible material in or on the implant.

32. (New) The implant of Claim 31, wherein the biocompatible material is selected from the group consisting of polyvinyl alcohol, polyvinyl pyrrolidone, collagen, heparinized collagen, tetrafluoroethylene, fluorinated polymer, fluorinated elastomer, flexible fused silica, polyolefin, polyester, titanium, stainless steel, Nitinol, and polysilicon.

33. (New) The implant of Claim 31, wherein the biocompatible material has a surface coating selected from the group consisting of polytetrafluoroethylene (PTFE), polyimide, hydrogel, heparin, and a therapeutic drug.

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34. **(New)** The implant of Claim 31, wherein the biocompatible material is capable of hydrating and expanding after implantation.

35. **(New)** The implant of Claim 21, wherein the anchor member is disposed proximally of the distal end.

36. **(New)** The implant of Claim 21, wherein the anchor member is disposed distally of said at least one inlet.